

**REMARKS**

The allowance of claims 2, 3 and 5 is acknowledged with appreciation.

By this amendment, new claims 6-10 have been added directed to refrigerants which include R245fa and/or R245ca. Support for new claims 6-10 is found, *inter alia*, in original claims 1-5 and in Table 1 on page 3 of the specification.

The rejection of claims 1 and 4 under 35 U.S.C. §102(b) over Dournel et al., WO 00/36046 is respectfully traversed.

Claims 1 and 4 require a refrigerant which **consists essentially of** 1,1,1,3,3-pentafluorobutane. The use of the transitional phrase "consisting essentially of" excludes the presence of additional substances which materially affect the basic characteristics of the refrigerant. As stated in MPEP §2111.03:

The transitional phrase "consisting essentially of" limits the scope of the claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s) " of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original)

The rejection is predicated on the assertion in the Office Action that "Dournel et al. discloses a refrigerant consisting essentially of 1,1,1,3,3-pentafluorobutane (page 6, line 2)." However, this assertion is incorrect. Dournel et al. merely discloses azeotropic or pseudo-azeotropic mixtures of 1,1,1,3,3-pentafluorobutane **and methanol**. Indeed, the sentence at page 6, line 2, pointed to in the Office Action as allegedly disclosing a refrigerant consisting essentially of 1,1,1,3,3-pentafluorobutane, reads in translation as follows:

The azeotropic or pseudo-azeotropic mixtures contain from 93 to 99% by weight of 1,1,1,3,3-pentafluorobutane and from 1 to 7% of methanol. (Translation taken from column 4, lines 23-25 of corresponding US 6,660,709.)

Although the disclosed mixtures may contain up to 99% by weight of 1,1,1,3,3-pentafluorobutane, this does not mean that they consist essentially of 1,1,1,3,3-pentafluorobutane. The question turns on whether the presence of 1%

or more methanol materially affects the basic and novel characteristics of the refrigerant.

Boiling point, of course, is one of the most significant basic characteristics of a refrigerant. And Dournel et al. makes it clear that the presence of 1% or more methanol results in an azeotropic or pseudoazeotropic mixture, i.e., a mixture in which the boiling point is depressed. It follows then that the presence of 1% or more methanol materially affects a basic characteristic of the refrigerant, and consequently that the "consisting essentially of" language of claims 1 and 4 excludes the presence of 1% or more methanol. Dournel et al. thus does **not** anticipate the inventions of claims 1 and 4, and reconsideration and withdrawal of the rejection are respectfully requested.

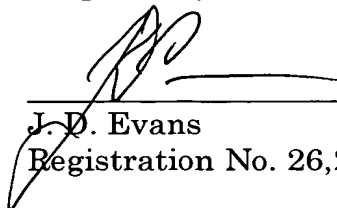
In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt, favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned at (202) 624-2845 would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #037110.52895US).

Respectfully submitted,

May 16, 2006

  
\_\_\_\_\_  
J. D. Evans  
Registration No. 26,269

CROWELL & MORING LLP  
Intellectual Property Group  
P.O. Box 14300  
Washington, DC 20044-4300  
Telephone No.: (202) 624-2500  
Facsimile No.: (202) 628-8844  
JDE:moi